

DEFINITIVE RULES FOR NOMENCLATURE OF ORGANIC CHEMISTRY

IUPAC 1957 Rules.

Section A. Hydrocarbons

Section B. Fundamental Heterocyclic Systems

These rules are taken from 'Definitive Rules for the Nomenclature of Organic Chemistry' which were adopted unanimously by the Commission on Nomenclature and by The Council of the International Union of Pure and Applied Chemistry at Paris 1957, and subsequently published by Butterworth's Scientific Publications on behalf of the Union. The extracts are printed here by permission of the Union and of Butterworth's Scientific Publications. Future 'tentative' rules will be published in the Bulletin of the Union, and when made 'definitive' in its Journal 'Pure and Applied Chemistry.'

RULES

A. HYDROCARBONS

Acyclic Hydrocarbons

A-1

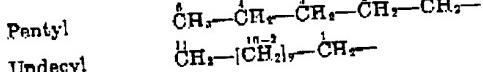
1.1.—The first four saturated unbranched acyclic hydrocarbons are called methane, ethane, propane and butane. Names of the higher members of this series consist of a numerical prefix and the termination "-ane." Examples of these numerical prefixes are shown in the table below. The generic name of saturated acyclic hydrocarbons (branched or unbranched) is "alkane."

Examples:

<i>n</i>		<i>n</i>		<i>n</i>		<i>n</i>	
1	Methane	12	Dodecane	22	Decane	32	Dotriacontane
2	Ethane	13	Tridecane	23	Tricosane	33	Tritriacontane
3	Propane	14	Tetradecane	24	Tetracosane	40	Tetracontane
4	Butane	15	Pentadecane	25	Pentacosane	50	Pentacontane
5	Pentane	16	Hexadecane	26	Hexacosane	60	Hexacontane
6	Hexane	17	Heptadecane	27	Heptacosane	70	Heptacontane
7	Heptane	18	Octadecane	28	Octacosane	80	Octacontane
8	Octane	19	Nonadecane	29	Nonacosane	90	Nonacontane
9	Nonane	20	Eicosane	30	Triacontane	100	Hectane
10	Decane	21	Heneicosane	31	Hentriacontane	132	Dotriacontaheptane
11	Undecane						

1.2.—Univalent radicals derived from saturated unbranched acyclic hydrocarbons by removal of hydrogen from a terminal carbon atom are named by replacing the ending "-ane" of the name of the hydrocarbon by "-yl." The carbon atom with the free valence is numbered as 1. As a class, these radicals are called normal, or unbranched-chain, alkyls.

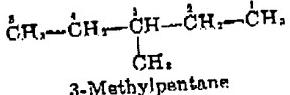
Example:



A-2

2.1.—A saturated branched acyclic hydrocarbon is named by prefixing the designations of the side chains to the name of the longest chain present in the formula.

Example:



C-1